

In the Claims

1. (currently amended) A flame retardant polymer composition which comprises

(a) an organic polymer substrate and

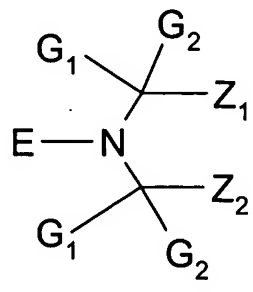
(b) an effective flame retarding amount of a synergistic mixture of

(i) at least one sterically hindered amine stabilizer, and

(ii) tris[3-bromo-2,2-bis(bromomethyl)propyl] phosphate ~~at least one conventional flame retardant selected from the group consisting of the organohalogen, phosphorus containing, isocyanurate and melamine based flame retardants and~~

(iii) at least one acid scavenger selected from the group consisting of hydrotalcites and amorphous basic aluminum magnesium carbonates,

where the stabilizers of component (i) are of the formula



where

G₁ and G₂ are independently alkyl of 1 to 8 carbon atoms or are together pentamethylene,

Z₁ and Z₂ are each methyl, or Z₁ and Z₂ together form a linking moiety which may additionally be substituted by an ester, ether, amide, amino, carboxy or urethane group, and

E is cyclohexyloxy; and

where the acid scavengers of component (iii) are present from about 0.1% to about 1.0% by weight based on component (a).

2. (currently amended) A composition according to claim 1 containing no flame retardant or conventional filler or a flame retardant or conventional filler in an amount less than ~~about~~ 3% by weight based on the weight of the polymer component (a).

3. (currently amended) A composition according to claim 1 containing no antimony compounds or antimony compounds in an amount less than ~~about~~ 1% by weight based on the weight of component (a).

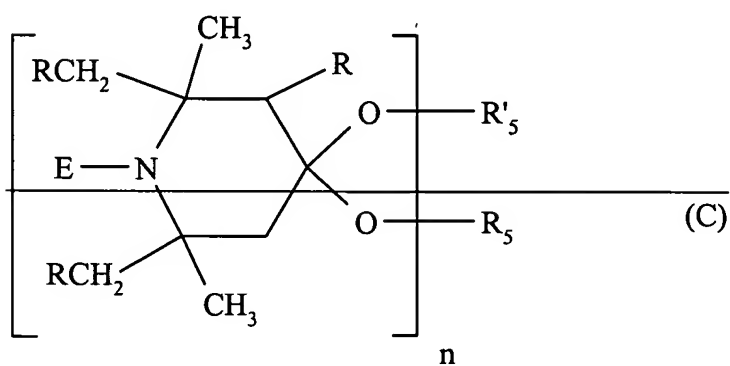
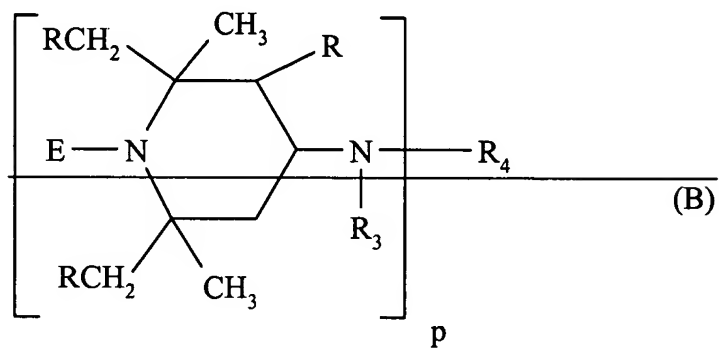
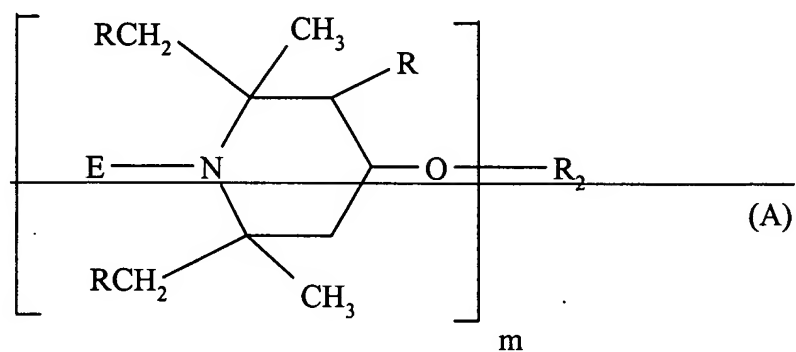
4. (original) A composition according to claim 1 in which the polymer component (a) is a thermoplastic polymer.

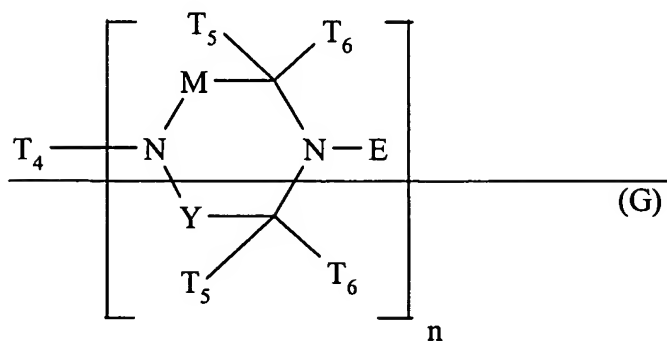
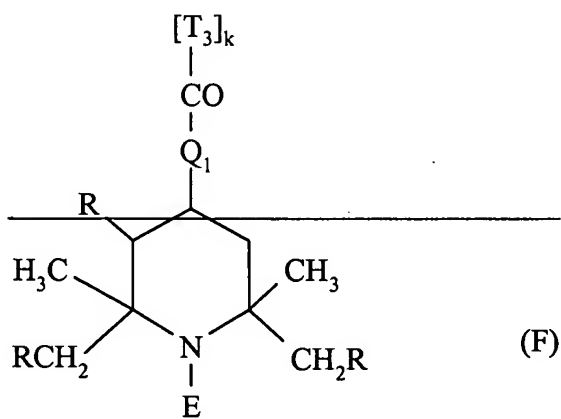
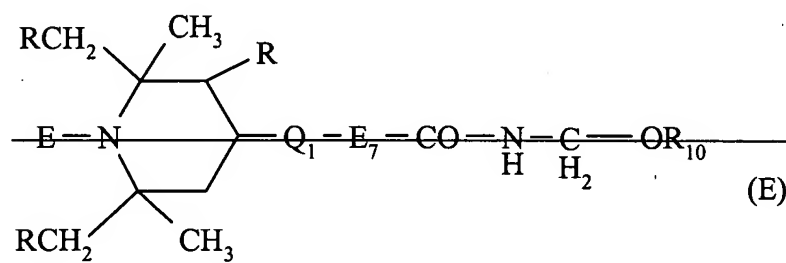
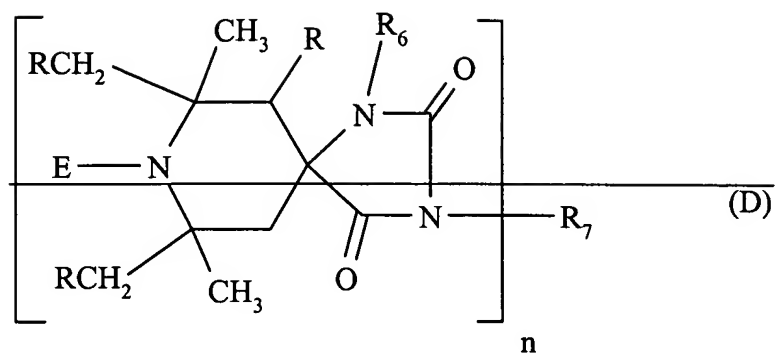
5. (original) A composition according to claim 1 in which the polymer component (a) is selected from the group of resins consisting of the polyolefins, the thermoplastic olefins, styrenic polymers and copolymers, ABS and polymers which contain hetero atoms, double bonds or aromatic rings.

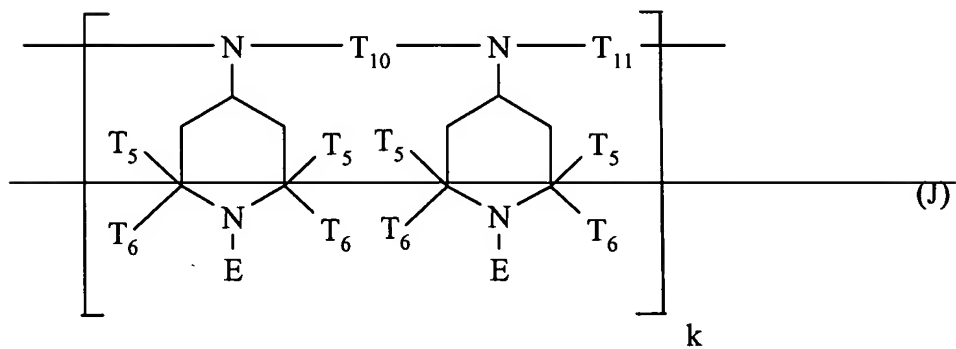
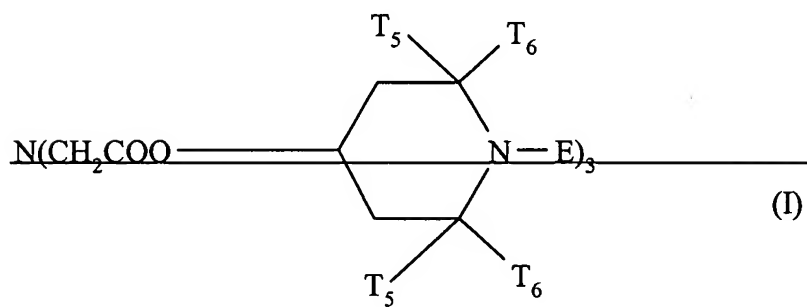
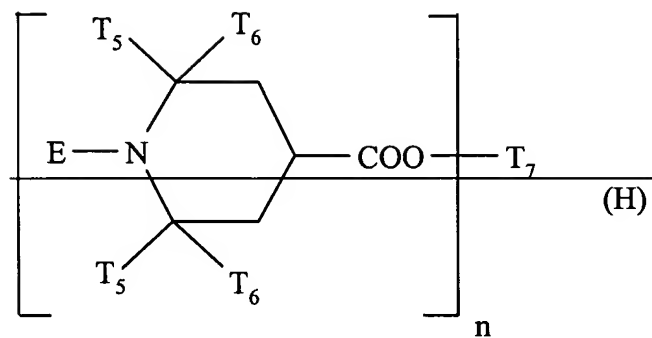
6. (original) A composition according to claim 1 in which the polymer component (a) is selected from polyethylene, polypropylene or copolymers thereof.

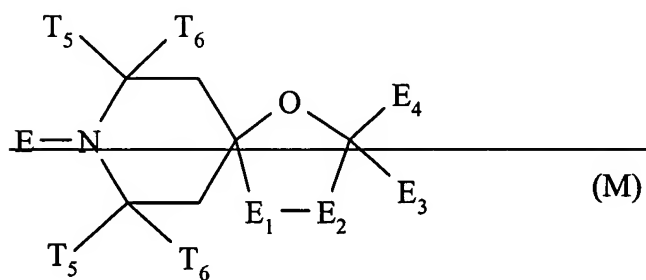
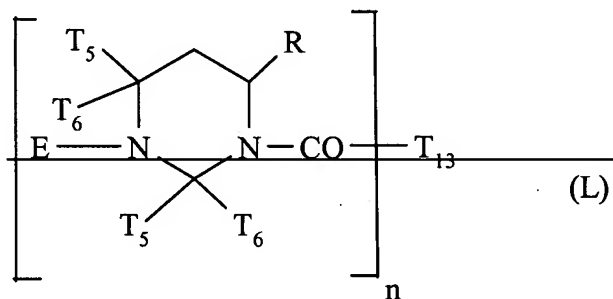
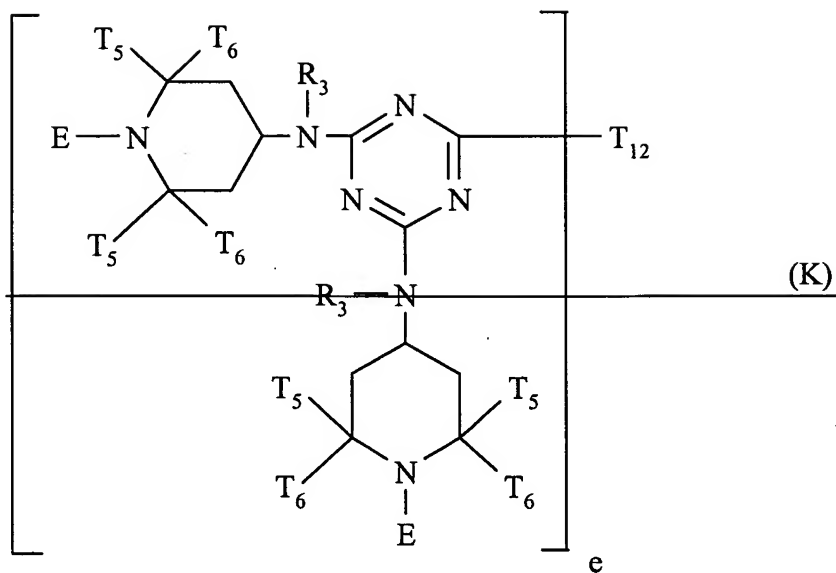
7. (canceled)

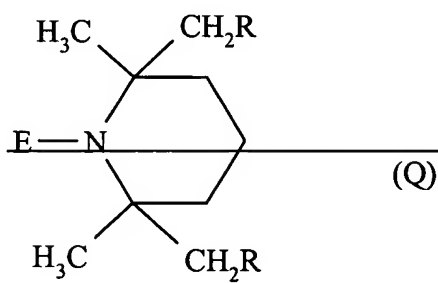
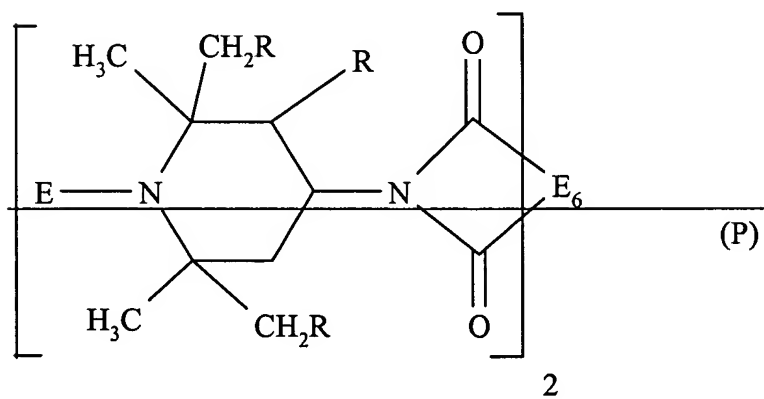
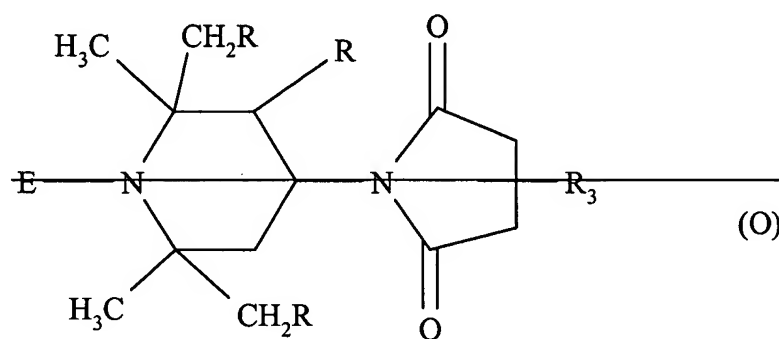
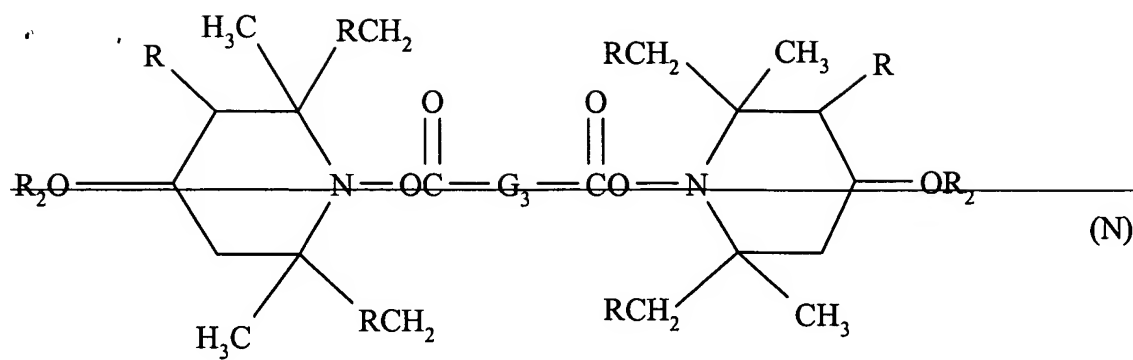
8. (currently amended) A composition according to claim 1[[7]] in which the stabilizers of component (i) are of the formula A-R

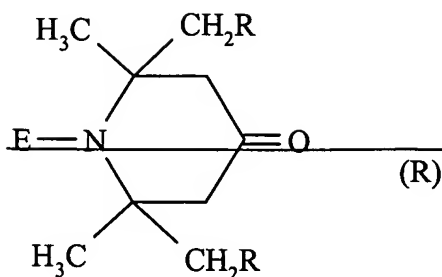












wherein

~~_____ E is oxyl, hydroxyl, alkoxy of 1 to 18 carbon atoms, cycloalkoxy of 5 to 12 carbon atoms or aralkoxy of 7 to 15 carbon atoms, or E is $\text{O}-\text{T}-(\text{OH})_b$;~~

~~_____ T is a straight or branched chain alkylene of 1 to 18 carbon atoms, cycloalkylene of 5 to 18 carbon atoms, cycloalkenylene of 5 to 18 carbon atoms, a straight or branched chain alkylene of 1 to 4 carbon atoms substituted by phenyl or by phenyl substituted by one or two alkyl groups of 1 to 4 carbon atoms;~~

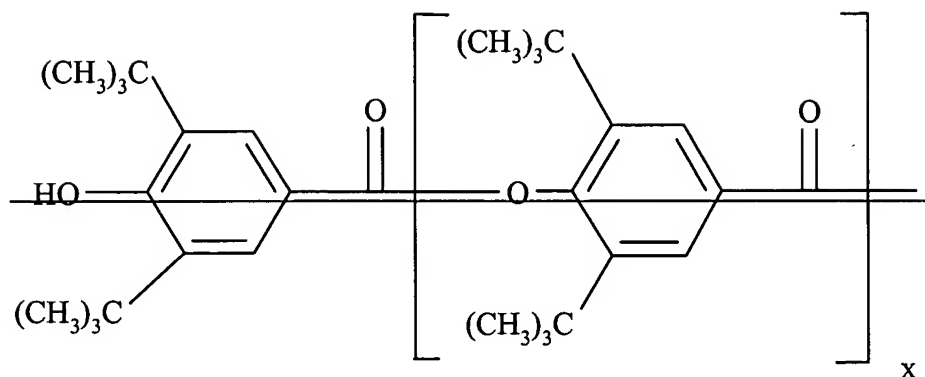
~~_____ b is 1, 2 or 3 with the proviso that b cannot exceed the number of carbon atoms in T, and when b is 2 or 3, each hydroxyl group is attached to a different carbon atoms of T;~~

~~_____ R is hydrogen or methyl;~~

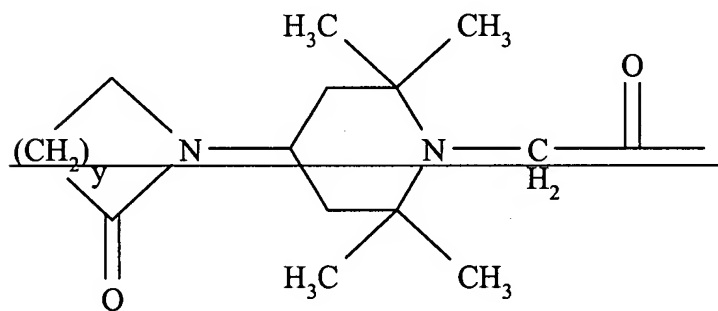
~~_____ m is 1 to 4,~~

~~_____ when m is 1,~~

~~_____ R_2 is hydrogen, $\text{C}_1\text{-C}_{18}$ alkyl or said alkyl optionally interrupted by one or more oxygen atoms, $\text{C}_2\text{-C}_{12}$ alkenyl, $\text{C}_6\text{-C}_{10}$ aryl, $\text{C}_7\text{-C}_{18}$ aralkyl, glycidyl, a monovalent acyl radical of an aliphatic, cycloaliphatic or aromatic carboxylic acid, or a carbamic acid, of a cycloaliphatic carboxylic acid having 5-12 C atoms or of an aromatic carboxylic acid having 7-15 C atoms, or~~



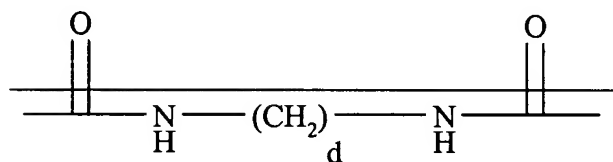
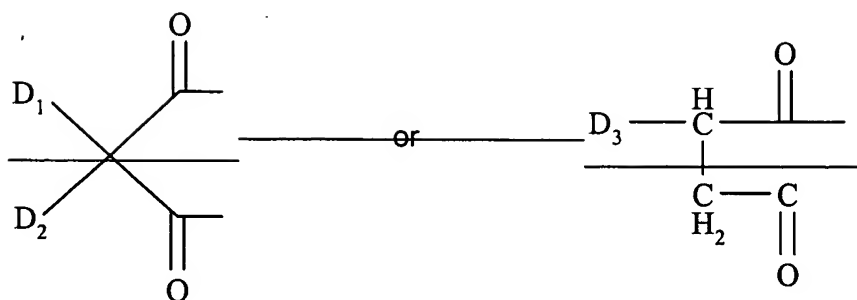
wherein x is 0 or 1,



wherein y is 2-4;

when m is 2,

~~R₂ is C₄-C₁₂alkylene, C₄-C₁₂alkenylene, xylene, a divalent acyl radical of an aliphatic, cycloaliphatic, araliphatic or aromatic dicarboxylic acid or of a dicarbamic acid, of a cycloaliphatic or aromatic dicarboxylic acid having 8-14 C atoms, or of an aliphatic, cycloaliphatic or aromatic dicarbamic acid having 8-14 C atoms;~~



wherein D_1 and D_2 are independently hydrogen, an alkyl radical containing up to 8 carbon atoms, an aryl or aralkyl radical including 3,5-di-*t*-butyl-4-hydroxybenzyl radical, D_3 is hydrogen, or an alkyl or alkenyl radical containing up to 18 carbon atoms, and d is 0-20;

when m is 3, R_2 is a trivalent acyl radical of an aliphatic, unsaturated aliphatic, cycloaliphatic, or aromatic tricarboxylic acid;

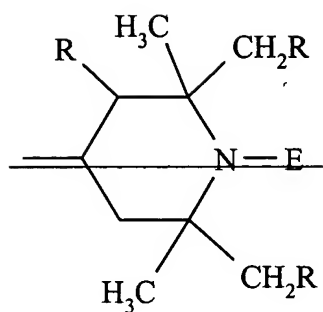
when m is 4, R_2 is a tetravalent acyl radical of a saturated or unsaturated aliphatic or aromatic tetracarboxylic acid including 1,2,3,4-butanetetracarboxylic acid, 1,2,3,4-but-2-enetetracarboxylic, and 1,2,3,5- and 1,2,4,5-pentanetetracarboxylic acid;

p is 1, 2 or 3,

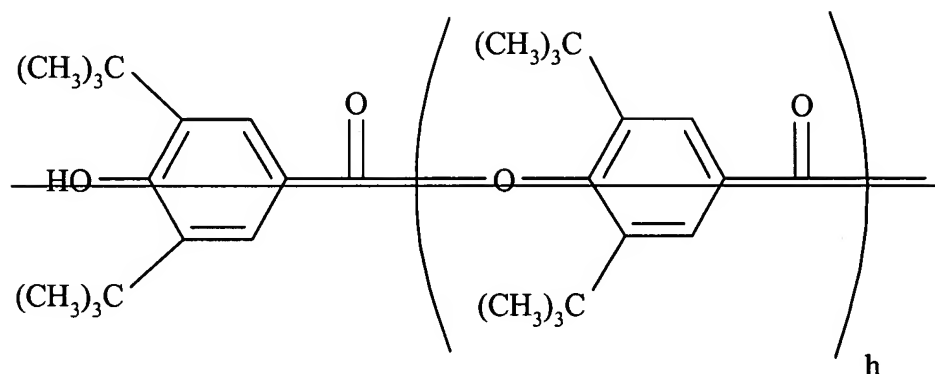
R_3 is hydrogen, C_4 - C_{12} alkyl, C_5 - C_7 cycloalkyl, C_7 - C_8 aralkyl, C_2 - C_{18} alkanoyl, C_3 - C_5 alkenoyl or benzoyl;

when p is 1,

R_4 is hydrogen, C_4 - C_{18} alkyl, C_5 - C_7 cycloalkyl, C_2 - C_8 alkenyl, unsubstituted or substituted by a cyano, carbonyl or carbamide group, aryl, aralkyl, or it is glycidyl, a group of the formula $\text{CH}_2\text{CH}(\text{OH})\text{Z}$ or of the formula CO-Z or CONH-Z wherein Z is hydrogen, methyl or phenyl; or a group of the formulae



or



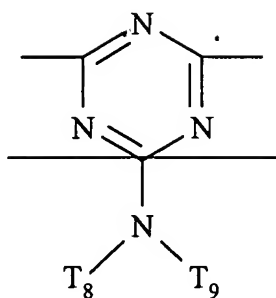
where h is 0 or 1,

R_3 and R_4 together, when p is 1, can be alkylene of 4 to 6 carbon atoms or 2-oxo-polyalkylene the cyclic acyl radical of an aliphatic or aromatic 1,2- or 1,3-dicarboxylic acid,

when p is 2,

R_4 is a direct bond or is C_4 - C_{42} alkylene, C_6 - C_{42} arylene, xylylene, a $-CH_2CH(OH)CH_2-$ group or a group $-CH_2CH(OH)CH_2-O-X-O-CH_2CH(OH)CH_2-$ wherein X is C_2 - C_{40} alkylene, C_6 - C_{45} arylene or C_6 - C_{42} cycloalkylene; or, provided that R_3 is not alkanoyl, alkenoyl or benzoyl, R_4 can also be a divalent acyl radical of an aliphatic, cycloaliphatic or aromatic dicarboxylic acid or dicarbamic acid, or can be the group $-CO-$; or

R_4 is



where T₈ and T₉ are independently hydrogen, alkyl of 1 to 18 carbon atoms, or T₈ and T₉ together are alkylene of 4 to 6 carbon atoms or 3-oxapentamethylene;

when p is 3,

R₄ is 2,4,6-triazinyl,

n is 1 or 2,

when n is 1,

R₅ and R'₅ are independently C₁-C₁₂ alkyl, C₂-C₁₂ alkenyl, C₂-C₁₂ aralkyl, or R₅ is also hydrogen, or R₅ and R'₅ together are C₂-C₈ alkylene or hydroxyalkylene or C₄-C₂₂ acyloxyalkylene;

when n is 2,

R₅ and R'₅ together are (CH₂)₂C(CH₂)₂;

R₆ is hydrogen, C₁-C₁₂ alkyl, allyl, benzyl, glycidyl or C₂-C₆ alkoxyalkyl;

when n is 1,

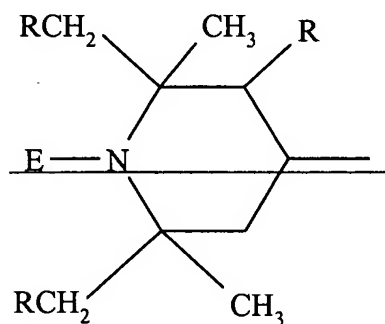
R₇ is hydrogen, C₁-C₁₂ alkyl, C₃-C₅ alkenyl, C₂-C₈ aralkyl, C₅-C₇ cycloalkyl, C₂-C₄ hydroxyalkyl, C₂-C₆ alkoxyalkyl, C₆-C₁₀ aryl, glycidyl, a group of the formula (CH₂)_tCOO-Q or of the formula (CH₂)_tO-CO-Q wherein t is 1 or 2, and Q is C₁-C₄ alkyl or phenyl; or

when n is 2,

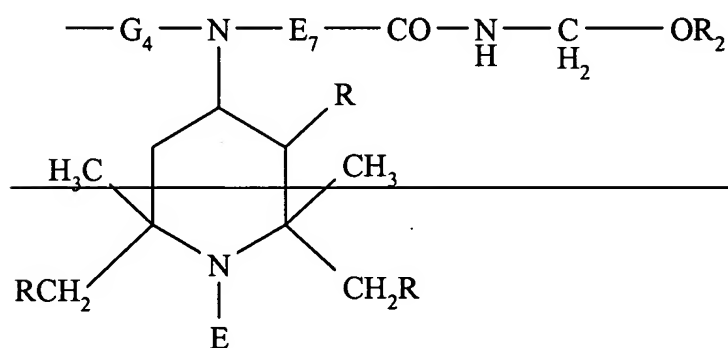
~~R_7 is C_2 - C_{12} alkylene, C_6 - C_{12} arylene, a group $CH_2CH(OH)CH_2O-X-OCH_2CH(OH)CH_2$ wherein X is C_2 - C_{40} alkylene, C_6 - C_{45} arylene or C_6 - C_{12} cycloalkylene, or a group $CH_2CH(OZ')CH_2(OCH_2CH(OZ')CH_2)_2$ wherein Z' is hydrogen, C_4 - C_{18} alkyl, allyl, benzyl, C_2 - C_{12} alkanoyl or benzoyl;~~

~~Q_4 is $N(R_8)$ or O ; E_7 is C_1 - C_3 alkylene, the group $CH_2CH(R_9)O$ wherein R_9 is hydrogen, methyl or phenyl, the group $(CH_2)_3NH$ or a direct bond;~~

~~R_{10} is hydrogen or C_4 - C_{18} alkyl, R_8 is hydrogen, C_4 - C_{18} alkyl, C_5 - C_7 cycloalkyl, C_7 - C_{12} aralkyl, cyanoethyl, C_6 - C_{10} aryl, the group $CH_2CH(R_9)OH$ wherein R_9 has the meaning defined above; a group of the formula~~



or a group of the formula



~~wherein G_4 is C_2 - C_6 alkylene or C_6 - C_{12} arylene; or R_8 is a group $E_7CO-NH-CH_2-OR_{10}$;~~

Formula F denotes a recurring structural unit of a polymer where T_3 is ethylene or 1,2-propylene, is the repeating structural unit derived from an alpha-olefin copolymer with an alkyl acrylate or methacrylate; and where k is 2 to 100;

T_4 has the same meaning as R_4 when p is 1 or 2,

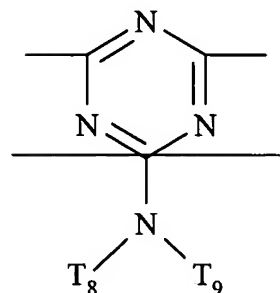
T_5 is methyl,

T_6 is methyl or ethyl, or T_6 and T_6 together are tetramethylene or pentamethylene,

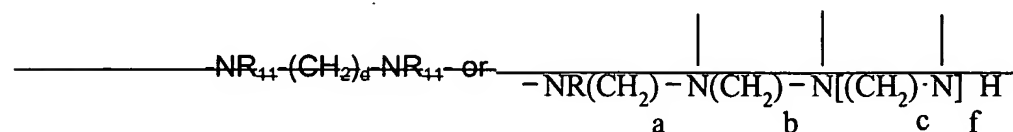
M and Y are independently methylene or carbonyl, and T_4 is ethylene where n is 2;

T_7 is the same as R_7 ,

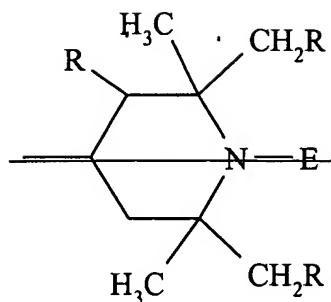
T_{10} and T_{11} are independently alkylene of 2 to 12 carbon atoms, or T_{11} is



T_{12} is piperazinyl,



where R_{11} is the same as R_3 or is also



~~a, b and c are independently 2 or 3, and f is 0 or 1; and~~

~~e is 2, 3 or 4;~~

~~T₁₃ is the same as R₂ with the proviso that T₁₃ cannot be hydrogen when n is 1;~~

~~E₁ and E₂, being different, each are CO or N(E₅) where E₅ is hydrogen, C₄-C₁₂ alkyl or C₄-C₂₂ alkoxycarbonylalkyl,~~

~~E₃ is hydrogen, alkyl of 1 to 30 carbon atoms, phenyl, naphthyl, said phenyl or said naphthyl substituted by chlorine or by alkyl of 1 to 4 carbon atoms, or phenylalkyl of 7 to 12 carbon atoms, or said phenylalkyl substituted by alkyl of 1 to 4 carbon atoms,~~

~~E₄ is hydrogen, alkyl of 1 to 30 carbon atoms, phenyl, naphthyl or phenylalkyl of 7 to 12 carbon atoms, or~~

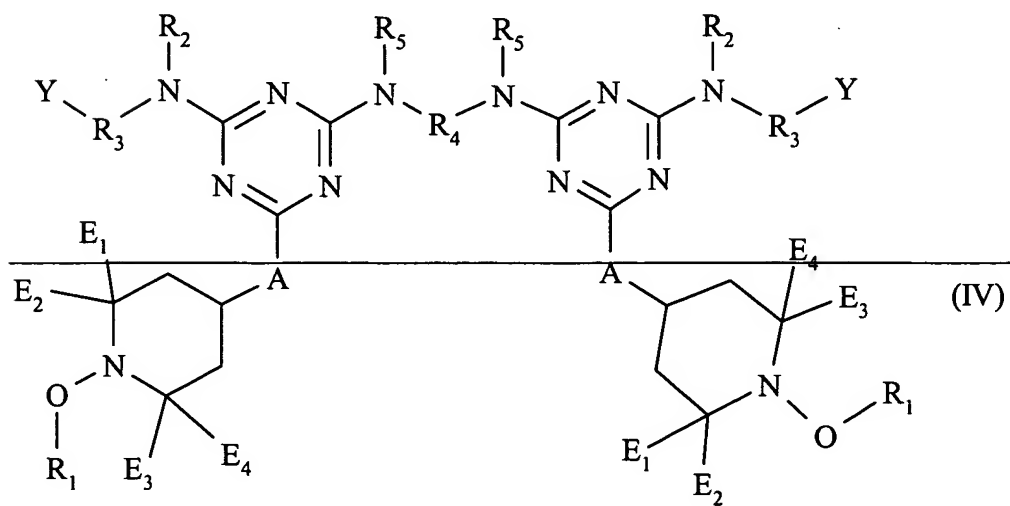
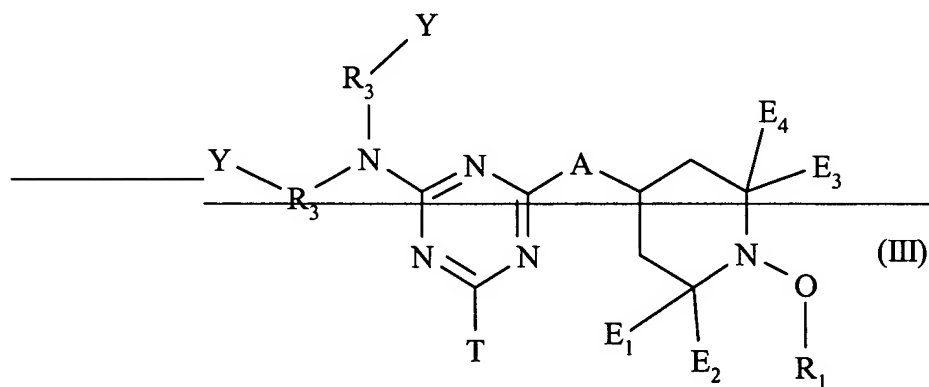
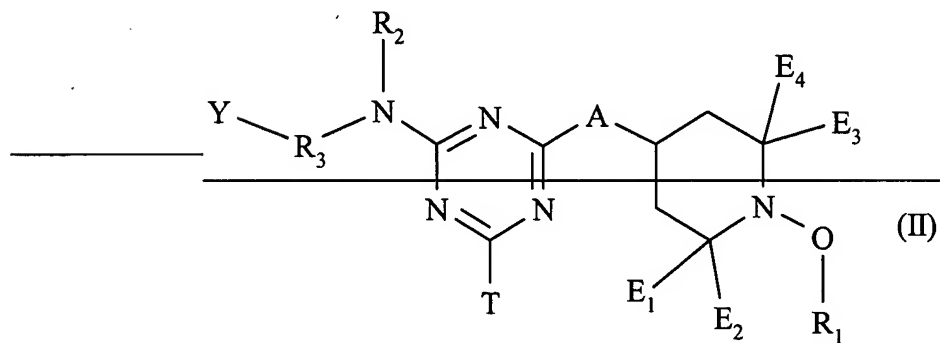
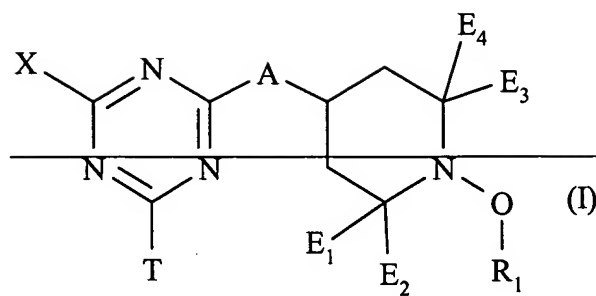
~~E₃ and E₄ together are polymethylene of 4 to 17 carbon atoms, or said polymethylene substituted by up to four alkyl groups of 1 to 4 carbon atoms,~~

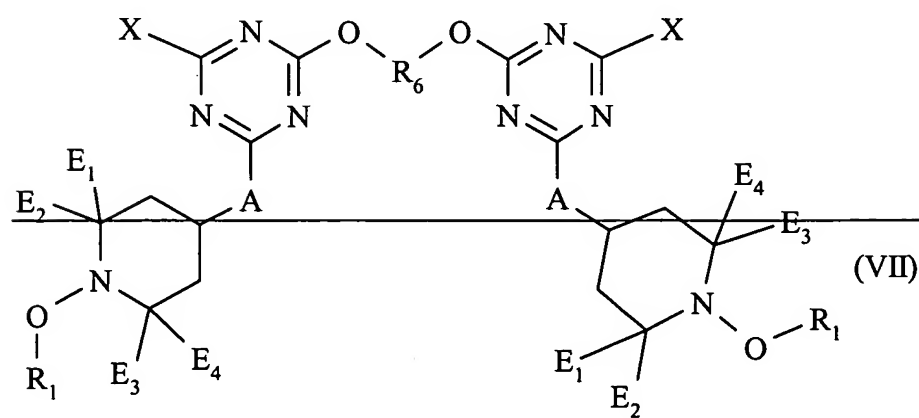
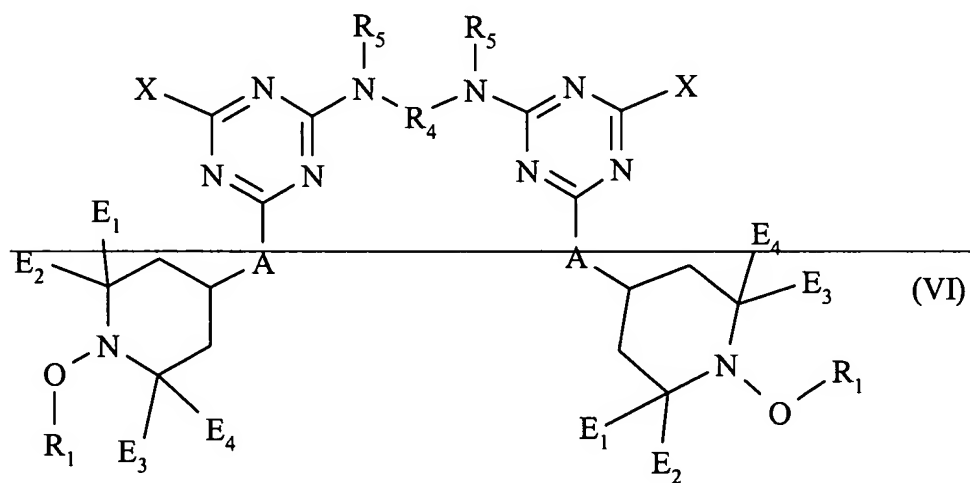
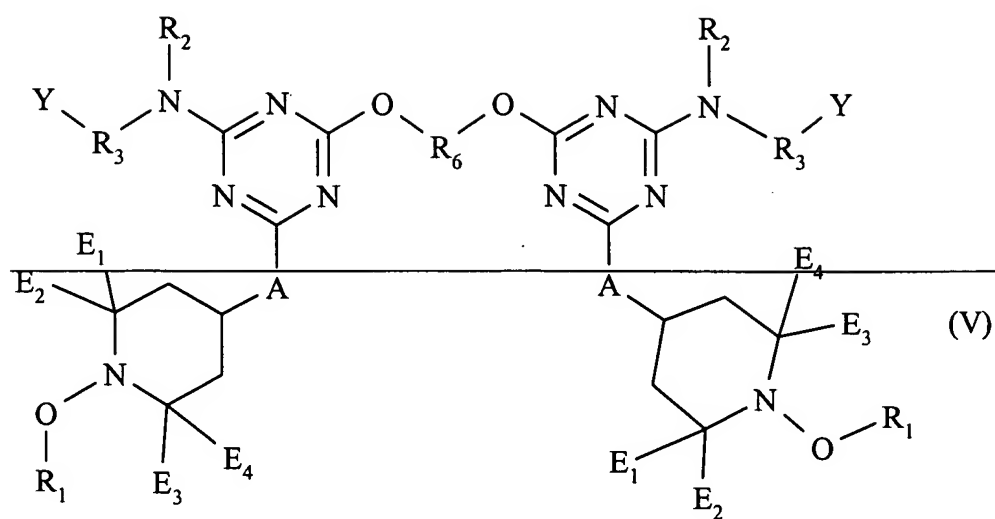
~~E₅ is an aliphatic or aromatic tetravalent radical,~~

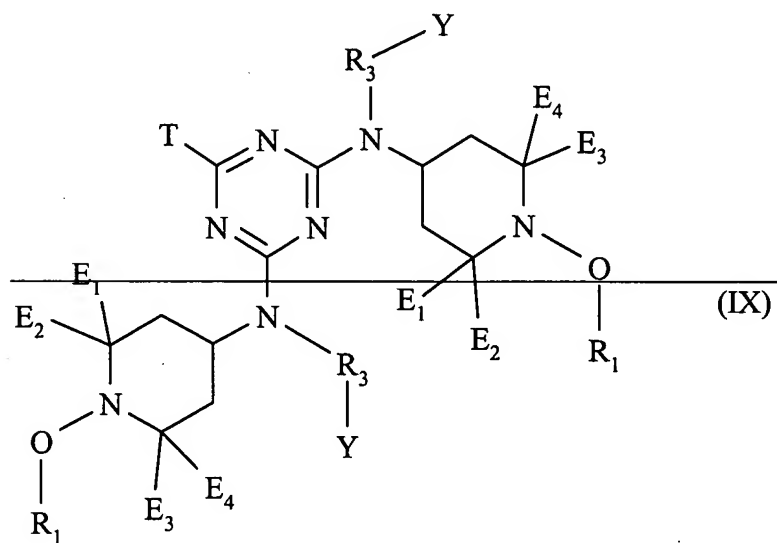
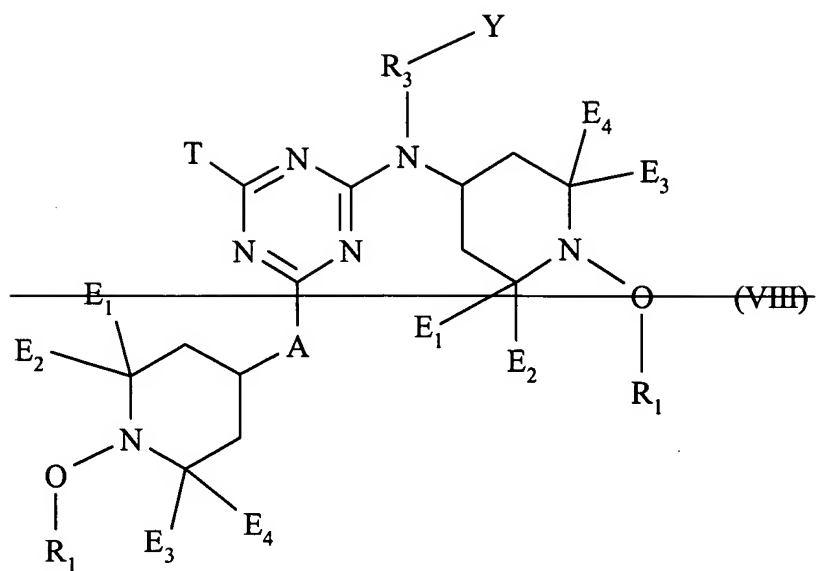
~~R₂ of formula (N) is a previously defined when m is 1;~~

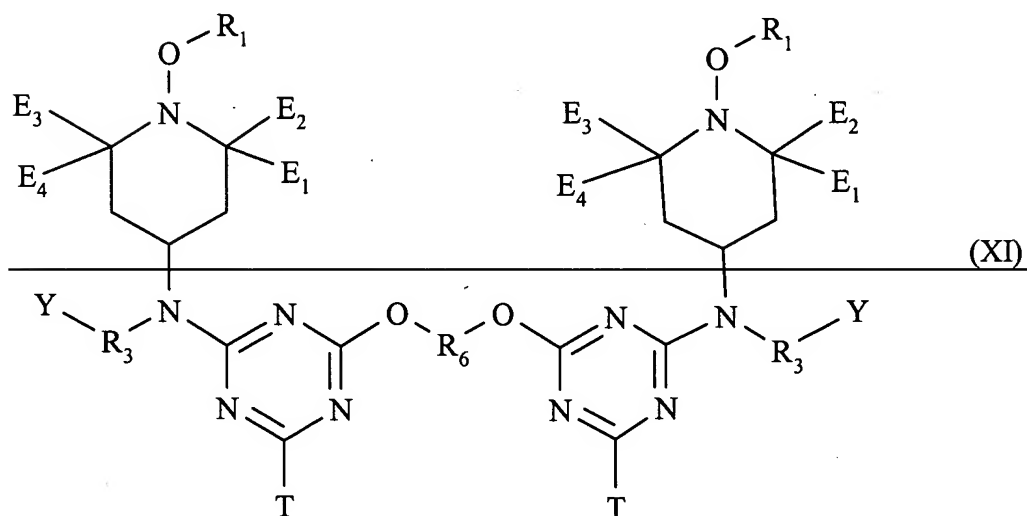
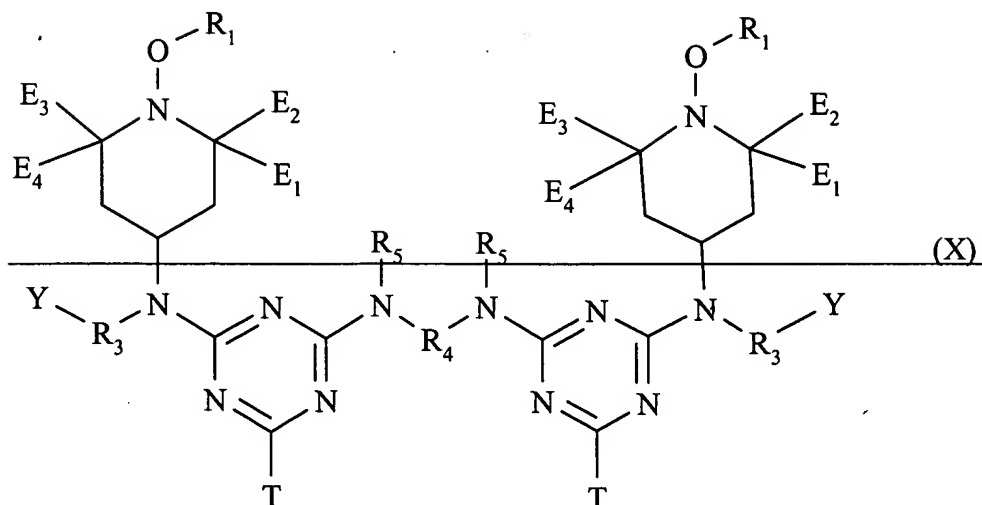
~~G₁ a direct bond, C₄-C₁₂ alkylene, phenylene or NH-G'-NH wherein G' is C₄-C₁₂ alkylene; or~~

~~wherein the hindered amine compound is a compound of the formula I, II, III, IV, V, VI, VII, VIII, IX, X or XI~~









wherein

~~E₁, E₂, E₃ and E₄ are independently alkyl of 1 to 4 carbon atoms, or E₁ and E₂ are independently alkyl of 1 to 4 carbon atoms and E₃ and E₄ taken together are pentamethylene, or E₁ and E₂; and E₃ and E₄ each taken together are pentamethylene,~~

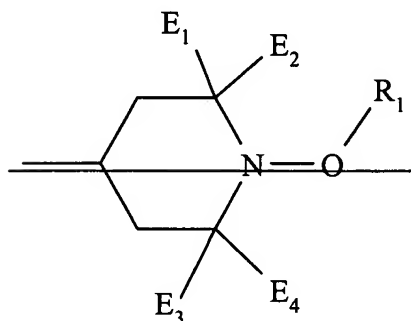
~~R₁ is alkyl of 1 to 18 carbon atoms, cycloalkyl of 5 to 12 carbon atoms, a bicyclic or tricyclic hydrocarbon radical of 7 to 12 carbon atoms, phenylalkyl of 7 to 15 carbon atoms, aryl of 6 to 10 carbon atoms or said aryl substituted by one to three alkyl of 1 to 8 carbon atoms,~~

~~R₂ is hydrogen or a linear or branched chain alkyl of 1 to 12 carbon atoms,~~

~~_____ R₃ is alkylene of 1 to 8 carbon atoms, or R₃ is CO, CO R₄, CONR₂, or CO NR₂ R₄,~~

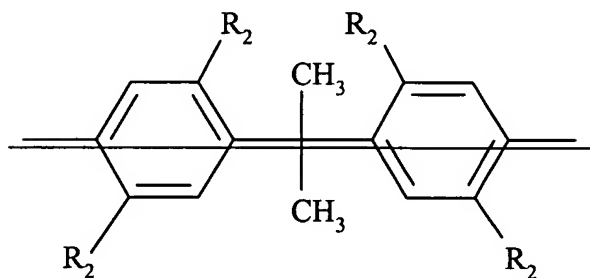
~~_____ R₄ is alkylene of 1 to 8 carbon atoms,~~

~~_____ R₅ is hydrogen, a linear or branched chain alkyl of 1 to 12 carbon atoms, or~~



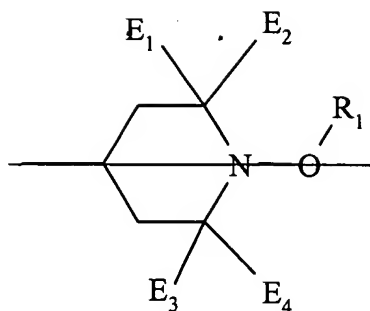
~~_____ or when R₄ is ethylene, two R₅ methyl substituents can be linked by a direct bond so that the triazine bridging group N(R₅) R₄ N(R₅) is a piperazin-1,4-diyl moiety,~~

~~_____ R₆ is alkylene of 2 to 8 carbon atoms or R₆ is~~

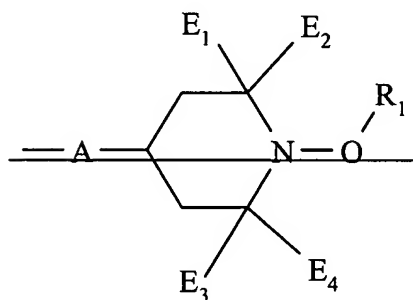


~~_____ with the proviso that Y is not OH when R₆ is the structure depicted above,~~

~~_____ A is O or NR₇ where R₇ is hydrogen, a straight or branched chain alkyl of 1 to 12 carbon atoms, or R₇ is~~



~~T is phenoxy, phenoxy substituted by one or two alkyl groups of 1 to 4 carbon atoms, alkoxy of 1 to 8 carbon atoms or $N(R_2)_2$ with the stipulation that R_2 is not hydrogen, or T is~~

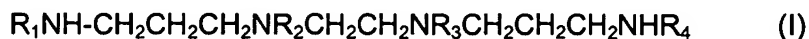


~~X is NH_2 , NCO , OH , O glycidyl, or $NHNH_2$, and~~

~~Y is OH , NH_2 , NHR_2 where R_2 is not hydrogen; or Y is NCO , $COOH$, oxiranyl, O glycidyl, or $Si(OR_2)_3$; or the combination R_3-Y is $CH_2CH(OH)R_2$ where R_2 is alkyl or said alkyl interrupted by one to four oxygen atoms, or R_3-Y is CH_2OR_2 ;~~

~~or~~

wherein the hindered amine compound is a mixture of N,N',N''-tris{2,4-bis[(1-hydrocarbyloxy-2,2,6,6-tetramethylpiperidin-4-yl)alkylamino]-s-triazin-6-yl}-3,3'-ethylenediiminodipropylamine; N,N',N''-tris{2,4-bis[(1-hydrocarbyloxy-2,2,6,6-tetramethylpiperidin-4-yl)alkylamino]-s-triazin-6-yl}-3,3'-ethylenediiminodipropylamine, and bridged derivatives as described by formulas I, II, IIA and III

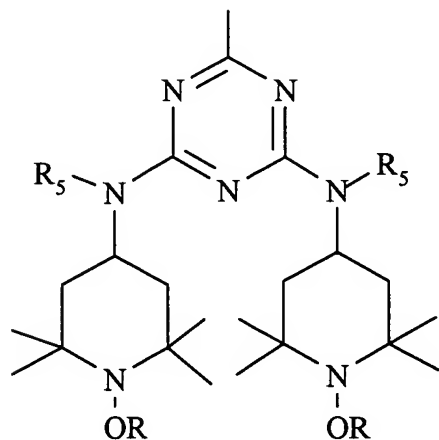




where in the tetraamine of formula I

R_1 and R_2 are the s-triazine moiety E; and one of R_3 and R_4 is the s-triazine moiety E with the other of R_3 or R_4 being hydrogen,

E is



R is ~~methyl, propyl, cyclohexyl or octyl~~,

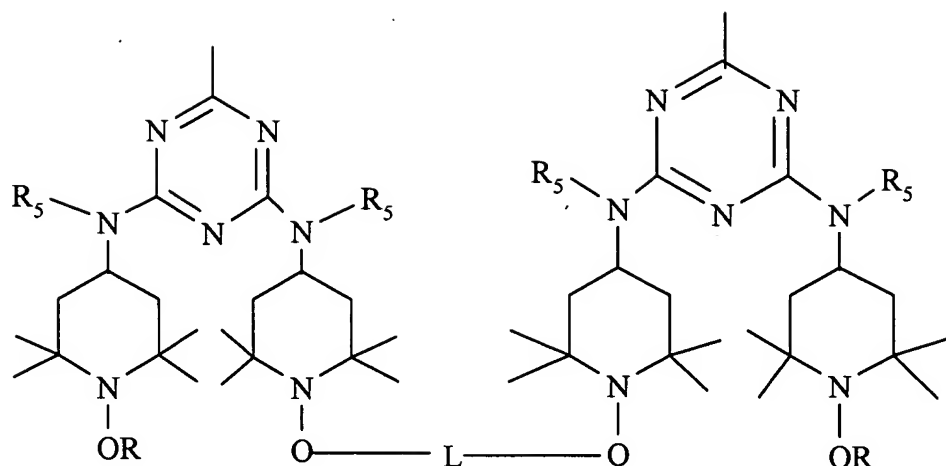
R_5 is alkyl of 1 to 12 carbon atoms,

where in the compound of formula II or IIA ~~when R is propyl, cyclohexyl or octyl~~,

T and T_1 are each a tetraamine substituted by R_1 - R_4 as is defined for formula I, where

(1) one of the s-triazine moieties E in each tetraamine is replaced by the group E_1 which forms a bridge between two tetraamines T and T_1 ,

E₁ is



or

(2) the group E₁ can have both termini in the same tetraamine T as in formula IIA where two of the E moieties of the tetraamine are replaced by one E₁ group, or

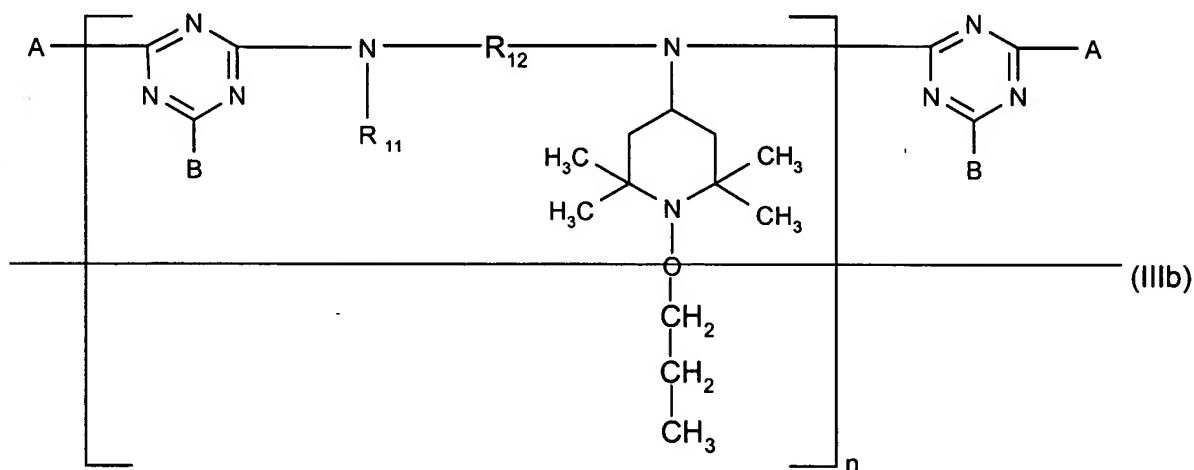
(3) all three s-triazine substituents of tetraamine T can be E₁ such that one E₁ links T and T₁ and a second E₁ has both termini in tetraamine T,

L is ~~propanediyl, cyclohexanediyl or octanediyl~~;

where in the compound of formula III

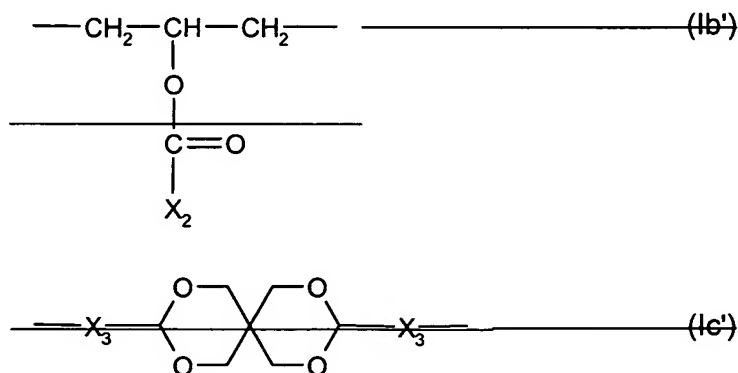
G, G₁ and G₂ are each tetraamines substituted by R₁-R₄ as defined for formula I, except that G and G₂ each have one of the s-triazine moieties E replaced by E₁, and G₁ has two of the triazine moieties E replaced by E₁, so that there is a bridge between G and G₁ and a second bridge between G₁ and G₂;

which mixture is prepared by reacting two to four equivalents of 2,4-bis[(1-hydrocarbyloxy-2,2,6,6-tetramethylpiperidin-4-yl)butylamino]-6-chloro-s-triazine with one equivalent of N,N'-bis(3-aminopropyl)ethylenediamine[[:]] or the hindered amine is a compound of the formula IIIb



in which the index n ranges from 1 to 15;

~~R₁₂ is C₂-C₁₂alkylene, C₄-C₁₂alkenylene, C₅-C₇cycloalkylene, C₅-C₇cycloalkylene-di(C₄-C₄alkylene), C₄-C₄alkylenedi(C₅-C₇cycloalkylene), phenylenedi(C₄-C₄alkylene) or C₄-C₁₂alkylene interrupted by 1,4-piperazinediyl, O or >N-X₄ with X₄ being C₄-C₁₂acyl or (C₄-C₁₂alkoxy)carbonyl or having one of the definitions of R₁₄ given below except hydrogen; or R₁₂ is a group of the formula (Ib') or (Ic');~~

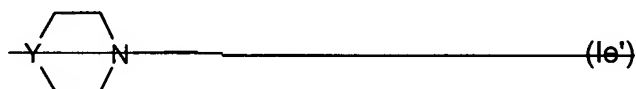


— with m being 2 or 3,

— X_2 being C_4 - C_{18} alkyl, C_5 - C_{12} cycloalkyl which is unsubstituted or substituted by 1, 2 or 3 C_4 - C_4 alkyl; phenyl which is unsubstituted or substituted by 1, 2 or 3 C_4 - C_4 alkyl or C_4 - C_4 alkoxy; C_7 - C_9 phenylalkyl which is unsubstituted or substituted on the phenyl by 1, 2 or 3 C_4 - C_4 alkyl; and

— the radicals X_3 being independently of one another C_2 - C_{12} alkylene;

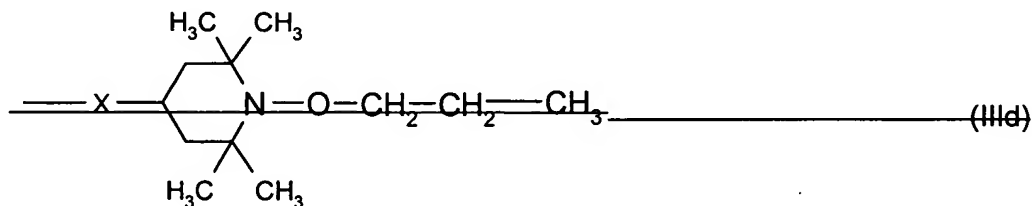
— R_{13} , R_{14} and R_{15} , which are identical or different, are hydrogen, C_4 - C_{18} alkyl, C_5 - C_{12} cycloalkyl which is unsubstituted or substituted by 1, 2 or 3 C_4 - C_4 alkyl; C_3 - C_{18} alkenyl, phenyl which is unsubstituted or substituted by 1, 2 or 3 C_4 - C_4 alkyl or C_4 - C_4 alkoxy; C_7 - C_9 phenylalkyl which is unsubstituted or substituted on the phenyl by 1, 2 or 3 C_4 - C_4 alkyl; tetrahydrofurfuryl or C_2 - C_4 alkyl which is substituted in the 2, 3 or 4 position by OH, C_4 - C_8 alkoxy, di(C_4 - C_4 alkyl)amino or a group of the formula (Ie');



— with Y being O, CH_2 , CH_2CH_2 or $>N-CH_3$,

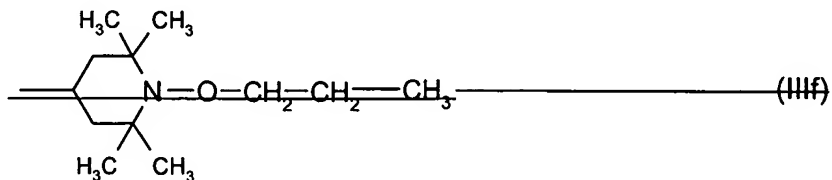
— or $N(R_{14})(R_{15})$ is additionally a group of the formula (Ie');

— the radicals A are independently of one another OR_{13} , $N(R_{14})(R_{15})$ or a group of the formula (III d);



— X is O or $>N-R_{16}$;

~~_____ R₄₆ is hydrogen, C₁-C₁₈alkyl, C₃-C₁₈alkenyl, C₅-C₁₂cycloalkyl which is unsubstituted or substituted by 1, 2 or 3 C₁-C₄alkyl; C₇-C₉phenylalkyl which is unsubstituted or substituted on the phenyl by 1, 2 or 3 C₁-C₄alkyl; tetrahydrofurfuryl, a group of the formula (III f),~~



~~or C₂-C₄alkyl which is substituted in the 2, 3 or 4 position by OH, C₁-C₈alkoxy, di(C₁-C₄alkyl)amino or a group of the formula (Ie');~~

~~_____ R₄₁ has one of the definitions given for R₄₆; and~~

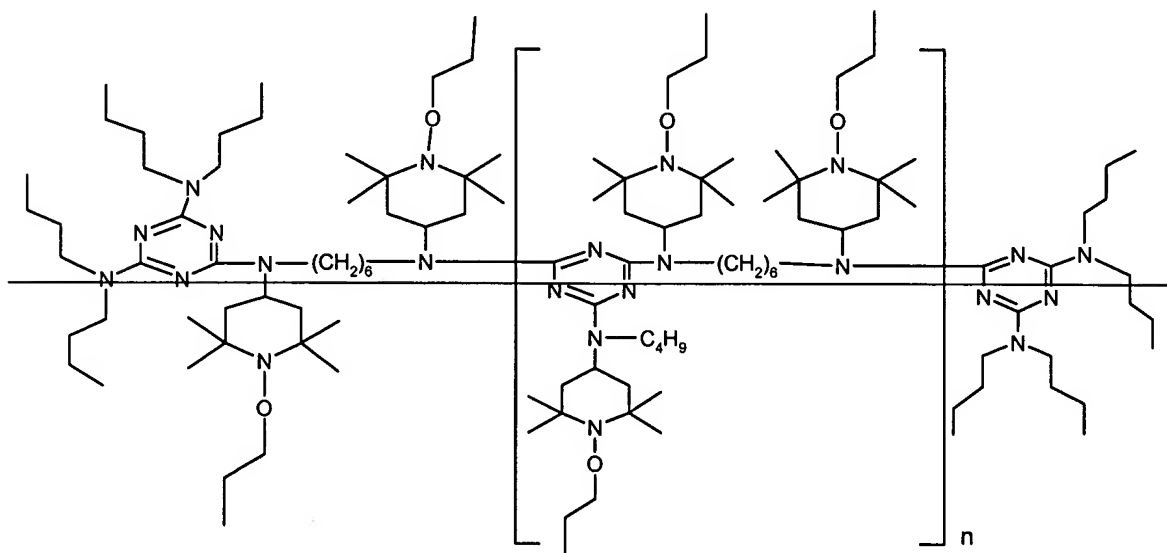
~~_____ the radicals B have independently of one another one of the definitions given for A.~~

9. (currently amended) A composition according to claim 1[[8]] wherein the stabilizers of component (i) are selected from the group consisting of

- 1-cyclohexyloxy-2,2,6,6-tetramethyl-4-octadecylaminopiperidine;
- bis(1-octyloxy-2,2,6,6-tetramethylpiperidin-4-yl) sebacate[[:]]
- 2,4-bis[(1-cyclohexyloxy-2,2,6,6-tetramethylpiperidin-4-yl)butylamino]-6-(2-hydroxyethylamino)-s-triazine;
- bis(1-cyclohexyloxy-2,2,6,6-tetramethylpiperidin-4-yl) adipate;
- 2,4-bis[(1-cyclohexyloxy-2,2,6,6-tetramethylpiperidin-4-yl)butylamino]-6-chloro-s-triazine;
- 1-(2-hydroxy-2-methylpropoxy)-4-hydroxy-2,2,6,6-tetramethylpiperidine[[:]]
- 1-(2-hydroxy-2-methylpropoxy)-4-oxo-2,2,6,6-tetramethylpiperidine[[:]]
- 1-(2-hydroxy-2-methylpropoxy)-4-octadecanoyloxy-2,2,6,6-tetramethylpiperidine[[:]]
- bis(1-(2-hydroxy-2-methylpropoxy)-2,2,6,6-tetramethylpiperidin-4-yl) sebacate[[:]]
- bis(1-(2-hydroxy-2-methylpropoxy)-2,2,6,6-tetramethylpiperidin-4-yl) adipate[[:]]
- 2,4-bis{N-[1-(2-hydroxy-2-methylpropoxy)-2,2,6,6-tetramethylpiperidin-4-yl]-N-butylamino}-6-(2-hydroxyethylamino)-s-triazine[[:]]

and

the reaction product of 2,4-bis[(1-cyclohexyloxy-2,2,6,6-tetramethylpiperidin-4-yl)-butylamino]-6-chloro-s-triazine with N,N'-bis(3-aminopropyl)ethylenediamine) ~~and the compound of formula~~



in which n is from 1 to 15.

10. (original) A composition according to claim 1 in which the stabilizers of component (i) are present from about 0.05% to about 20% by weight based on the polymer substrate (a).

11. (original) A composition according to claim 1 in which the stabilizers of component (i) are present from about 0.1% to about 10% by weight based on the polymer substrate (a).

12. (canceled)

13. (currently amended) A composition according to claim 1 in which ~~the conventional flame-retardants of~~ component (ii) ~~is~~are present in an amount from about 0.5% to about 45% by weight based on the polymeric substrate (a).

14. (canceled)

15. (canceled)

16. (canceled)

17. (original) A composition according to claim 1 in which the acid scavengers of component (iii) are present from about 0.2% to about 0.8% by weight based on component (a).

18. (original) A composition according to claim 1 comprising a further component selected from the group consisting of pigments, dyes, plasticizers, phenolic antioxidants, thixotropic agents, levelling assistants, basic costabilizers, nitrene stabilizers, amine oxide stabilizers, benzofuranone stabilizers, UV absorbers, sterically hindered amines, metal passivators, metal oxides, organophosphorus compounds, hydroxylamines, and mixtures thereof.

19. (currently amended) A composition according to claim 18 in which the further component is selected from the group consisting of phenolic antioxidants, calcium stearate, zinc stearate, phosphite ~~and~~ phosphonite stabilizers, benzofuranone stabilizers, UV absorbers of the 2-(2'-hydroxyphenyl)benzotriazole ~~and~~ 2-(2-hydroxyphenyl)-1,3,5-triazine classes, and sterically hindered amines.

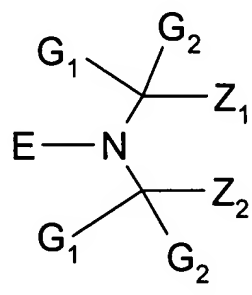
20. (currently amended) A process for imparting light stability and flame retardancy to an organic polymer substrate, which process comprises adding to said polymer substrate

(i) at least one sterically hindered amine stabilizer,

(ii) tris[3-bromo-2,2-bis(bromomethyl)propyl] phosphate at least one conventional flame retardant selected from the group consisting of the organohalogen, phosphorus-containing, isocyanurate and melamine based flame retardants and

(iii) at least one acid scavenger selected from the group consisting of hydrotalcites and amorphous basic aluminum magnesium carbonates.

where the stabilizers of component (i) are of the formula



where

G₁ and G₂ are independently alkyl of 1 to 8 carbon atoms or are together pentamethylene,

Z₁ and Z₂ are each methyl, or Z₁ and Z₂ together form a linking moiety which may additionally be substituted by an ester, ether, amide, amino, carboxy or urethane group, and

E is cyclohexyloxy; and

where the acid scavengers of component (iii) are present from about 0.1% to about 1.0% by weight based on the polymer substrate.

21. (canceled)

22. (canceled)

23. (currently amended) A composition according to claim 1~~polymer article according to claim 22~~ which is a construction article selected from the group consisting of roofing membranes, window profiles, siding and moldings.

24. (currently amended) A composition according to claim 1~~polymer article according to claim 22~~ which is a thermoplastic polyolefin article.

25-29. (canceled)